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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/331,680	12/10/2008	William DiPoala	081276-2025	3037

34044 7590 04/19/2017
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EXAMINER

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ART UNIT	PAPER NUMBER
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2445

NOTIFICATION DATE	DELIVERY MODE
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04/19/2017

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WILLIAM DIPOALA

Appeal 2016-007441
Application 12/331,680¹
Technology Center 2400

Before DEBRA K. STEPHENS, BRADLEY W. BAUMEISTER, and
MICHAEL J. ENGLE, *Administrative Patent Judges*.

ENGLE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1–7, 21–29, 32, and 34–36, which are all of the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

Technology

“The present invention provides a security system that incorporates a less than lethal deterrent (LTLD) [e.g., pepper spray] to force a burglar or other intruder out of the premises or to incapacitate the intruder until police arrive.” Spec. ¶ 10.

¹ According to Appellant, the real parties in interest are Bosch Security Systems, Inc. and Robert Bosch GMBH. App. Br. 2.

Illustrative Claim

Claims 1 and 35 are illustrative and reproduced below with the limitations at issue emphasized:

1. A security system, comprising:
 - an enclosure;*
 - a video system *disposed in the enclosure* and configured to obtain images of an intruder;
 - a deterrent dispensing device *disposed in the enclosure* and configured to dispense a deterrent substance in a selected direction; and
 - an actuator module *disposed in the enclosure* and communicatively coupled to the video system and coupled to the deterrent dispensing device, the actuator module being configured to receive a video signal from the video system and, in response thereto, control the deterrent dispensing device.

35. The method according to claim 25, wherein the deterrent dispensing device includes *multiple nozzles*, and the outputting of a deterrent substance from the deterrent dispensing device in a direction based on a location of a moving object includes *selecting a subset of the multiple nozzles to output a deterrent substance*.

Rejections

Claim 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by Peter Rojas, *The Smell Cannon*, Engadget (Apr. 2, 2004), available at <http://www.engadget.com/2004/04/02/the-smell-cannon/>. Final Act. 5.

Claim 1 stands rejected under 35 U.S.C. § 102(a) as anticipated by *The Sentry Project* (2008), <http://web.archive.org/web/20080801162124/http://www.paintballsentry.com/history.html>. Final Act. 6.

Claims 1–3, 5–7, and 21–24 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Latham et al. (US 2009/0122143 A1; May 14, 2009) and Greg Kogut & Larry Drymon, *A Vision System for an*

Unmanned, Non-lethal Weapon, SPIE Proc. Vol. 5608, Intelligent Robots & Computer Vision XXII (2004). Final Act. 7.

Claims 25–28 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Latham, Kogut, and Lemons et al. (US 6,504,479 B1; Jan. 7, 2003). Final Act. 11.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as obvious over the combination of Latham, Kogut, and Somner et al. (US 5,819,124; Oct. 6, 1998). Final Act. 13.

Claims 29, 32, and 34 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Latham, Kogut, Lemons, and Somner. Final Act. 14.

Claims 35 and 36 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Latham, Kogut, Lemons,² and Sells et al. (US 2005/0124234 A1; June 9, 2005). Final Act. 17; App. Br. 18; Ans. 3.

ISSUES

1. Did the Examiner err in finding Rojas, Sentry Project, Latham, or Lemons discloses “an enclosure” and various components disposed “in the enclosure,” as recited in claims 1, 2, 25, and 29?

2. Did the Examiner err in finding the combination of Latham, Kogut, and Lemons teaches or suggests “outputting a deterrent substance from the deterrent dispensing device in a direction that is based on the location of the moving object as determined from the captured sounds,” as recited in claim 25?

² As Appellant notes, the Final Rejection did not list Lemons in the rejection of claim 35, but necessarily included Lemons through claim 35’s dependence on claim 25. App. Br. 18. The Examiner corrected this in the Answer. Ans. 3. We deem this omission to be a harmless error.

3. Did the Examiner err in finding a person of ordinary skill in the art would have been motivated to combine Sells with Latham, Kogut, and Lemons for claims 35 and 36?

CLAIM CONSTRUCTION

“an enclosure” / “in the enclosure”

Claim 1 recites “an enclosure” and various different components “disposed in the enclosure.” Commensurate limitations are recited in claims 2 and 4 (“disposed in the enclosure”); 25 (“disposed in an enclosure” / “in the enclosure”); 29 (“disposed in an enclosure”); and 34 (“in the enclosure”).

The Examiner concludes “[a]n enclosure can be interpreted as a room, multiple rooms, or even a building [because] Appellant has not given a clear and reasonable definition of enclosure.” Ans. 6.

Appellant initially contends—without citation—that “[o]ne definition of enclosure is ‘an area that is sealed off with an artificial or natural barrier.’” App. Br. 11. But Appellant later argues “utilizing the dictionary definition of ‘enclosure’ appears unnecessary” because “the specification *defines* the term ‘enclosure’ as providing a 360 degree range in the field of view” and requires that the “components are provided within a *single* enclosure.” Reply Br. 3–4 (citing Spec. ¶ 10) (emphasis added).

We are not persuaded this disclosure constitutes a definition. The Federal Circuit has explained that

[t]o act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning. It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner

in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.

Thorner v. Sony Computer Entm’t Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quotations omitted).

Here, the only text of the Specification cited by Appellant in support of his proposed definition states that “[t]he motion detector, vision system and LTLD *may be* housed in the same enclosure, which provides a 360 degree range in the field of view.” Spec. ¶ 10 (emphasis added). This statement provides a non-limiting example (“may be”), not a definition. Thus, we are not persuaded that the term “an enclosure” should be construed as necessitating a 360 degree range in the field of view.

For the same reason, we are not persuaded that this non-limiting example alone limits the phrase “an enclosure” to one enclosure. *See* Reply Br. 3; App. Br. 10–16, 18; Spec. ¶ 10 (“*may be* housed in the same enclosure”) (emphasis added); *see also* Spec. ¶ 9 (“in a same housing”).

[The Federal Circuit] has repeatedly emphasized that an indefinite article “a” or “an” in patent parlance carries the meaning of “one or more” in open-ended claims containing the transitional phrase “comprising.” That “a” or “an” can mean “one or more” is best described as a rule, rather than merely as a presumption or even a convention. The exceptions to this rule are extremely limited: a patentee must evince a clear intent to limit “a” or “an” to “one.” The subsequent use of definite articles “the” or “said” in a claim to refer back to the same claim term does not change the general plural rule, but simply reinvokes that non-singular meaning. An exception to the general rule that “a” or “an” means more than one only arises where the language of the claims themselves, the specification, or the prosecution history necessitate a departure from the rule.

Baldwin Graphic Sys., Inc. v. Siebert, Inc., 512 F.3d 1338, 1342–43 (Fed. Cir. 2008) (quotations omitted).

However, the question remains whether the claim limitations reciting components “disposed in the enclosure” require that the components be in the *same* enclosure or enclosures. To address this, we turn to the embodiments in the Specification.

All of the figures in the Specification depict embodiments that are “modular.” Figure 2 is exemplary and reproduced below:

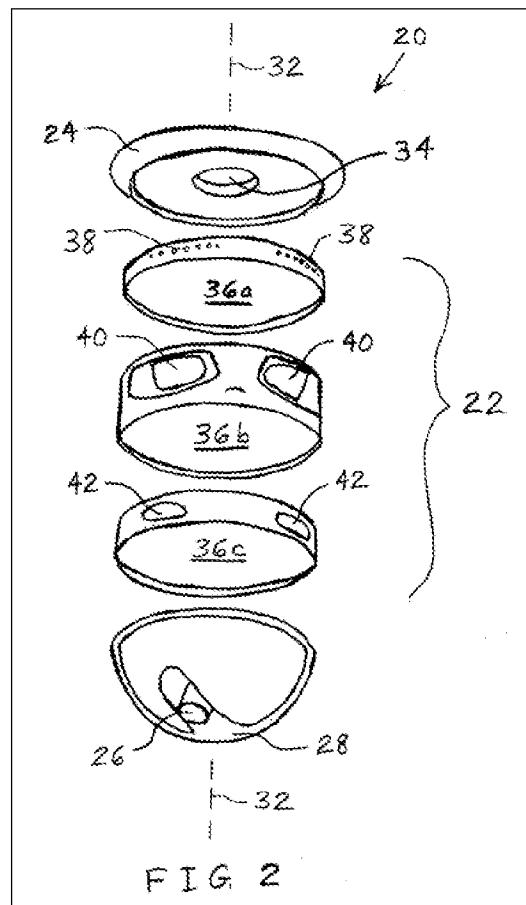


Figure 2 depicts “a modular building system arrangement 20” in which multiple “different building systems” are “stacked on top of each other.” Spec. ¶¶ 23, 25. For example, Figure 2 depicts a “base 24” with a “processor 44” that functions as a centralized controller (¶ 28), “a microphone ring 36a” below the base (¶ 25), “a passive infrared (PIR) motion detection ring 36b” stacked under ring 36a (¶¶ 25–26), “a lighting

ring 36c” stacked under ring 36b (¶¶ 25, 27), and finally “an electrical end cap module in the form of a surveillance camera 26” (¶ 23). Collectively, the “different building systems 36a-c stacked on top of each other” are included in “building system assembly 22.” *Id.* ¶ 25. Building system assembly 22 is “coupled to” base 24 and the camera module. *Id.* ¶ 23.

However, the Specification expressly states “*each* of the building systems and the camera may have an outer housing” (i.e., multiple systems/modules means multiple housings). Spec. ¶ 48 (emphasis added). “Further, the outer *housings* [i.e., plural] of each of the building systems and the camera may have an equal diameter and circumference.” *Id.* ¶ 48 (emphasis added); *see also id.* ¶ 39 (“As may be evident from the above description of the modularity of the electrical and mechanical connectors of base 24, building systems 36a-c, camera 26 and their *housings*, . . .”) (emphasis added). Thus, the Specification teaches that different modules, including the three modules in claim 1 (i.e., the claimed video system, deterrent dispensing device, and actuator module), can have *different* housings. In fact, every figure depicts the components having different housings. Similarly, the Specification discusses the “bottom surface” and “upper surface” of various building systems, indicating that the respective housings provide separate chambers. Spec. ¶¶ 32 (“a bottom surface 64 of building system 56b [in Fig. 6]”), 35 (“upper surface of building system 36b [in Fig. 10]”).

The Federal Circuit has “often remarked that a construction which excludes the preferred embodiment is rarely, if ever correct.” *PPC Broadband, Inc. v. Corning Optical Commc’ns RF, LLC*, 815 F.3d 747, 755 (Fed. Cir. 2016) (quotation omitted). Here, if “disposed in the enclosure”

meant “disposed in the *same housing*,” this would read out every embodiment shown in the figures because each of the depicted modules has its own housing and surfaces separating it from the other modules. Especially under the broadest reasonable interpretation, we do not believe that the claim terms “an enclosure” and “disposed in the enclosure” present one of those rare cases reading out all of the preferred embodiments in favor of a single non-limiting example. If Appellant desires such a result, he is free to amend the claims to clarify.

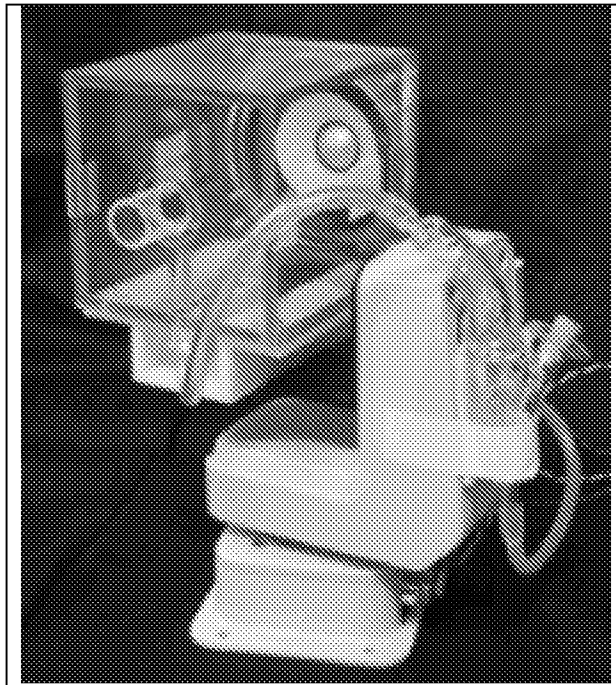
Instead, under the broadest reasonable interpretation, the remaining possible constructions range from (A) the components need not be disposed in the *same* enclosure so long as each component is disposed in *any* of the one or more enclosures, to (B) the components need to be disposed in the *same* single enclosure, but that enclosure can comprise multiple modules and each module can have its own housing, as shown in the figures of the Specification. We need not resolve precisely where within that spectrum the proper construction lies because we find the prior art teaches the limitations even under the narrower interpretation of construction (B).

ANALYSIS

Anticipation: Rojas (Claim 1)

Claim 1 recites “*an enclosure*”; “a video system *disposed in the enclosure*”; “a deterrent dispensing device *disposed in the enclosure*”; and “an actuator module *disposed in the enclosure*.”

Appellant contends “[t]here are three separate enclosures shown in the Rojas picture” and no one enclosure has all three components. App. Br. 10. We disagree with Appellant’s interpretations. A picture of Rojas’ smell cannon is reproduced below:



Rojas depicts a base coupled to an arm coupled to a transparent box. Rojas 1; *see also* App. Br. 10; Ans. 4 (“a single unit with various moving parts”). This is no different than the modules “coupled” or “stacked” in Figure 2 of the Specification. *See* Spec. ¶¶ 23, 25. That is, Rojas’s base, arm, and transparent box together reasonably can be interpreted as comprising “an enclosure,” consistent with the Specification’s usage of that term.

Thus, for the reasons discussed above, we are not persuaded the Examiner erred in finding Rojas discloses the “disposed in the enclosure” limitations under the broadest reasonable interpretation.

Accordingly, we sustain the Examiner’s rejection of claim 1 as anticipated by Rojas.

Anticipation: Sentry Project (Claim 1)

The Sentry Project discloses a paintball gun mounted on a tripod, a camera mounted lower on a tripod, and a laptop computer not mounted on

the tripod but instead connected by wires to components on the tripod. *See* Sentry Project 1.

Appellant contends “[a]ll of the gun, camera and computer are exposed and viewable” so “[n]one are enclosed in any manner, much less in the same enclosure.” App. Br. 11.

The Examiner finds “[t]he entire unit as presented in the Sentry Project is considered a single enclosure that contains a video system, a deterrent dispensing device, and an actuator module.” Ans. 4.

Here, we agree with Appellant that the Examiner has not sufficiently explained how the claim limitations are met. For example, to the extent the gun is the claimed “deterrent dispensing device,” the Examiner has not explained how the gun is “disposed in the enclosure,” let alone in a “single enclosure” with the computer. Although “the enclosure” may permit multiple modules, each with its own housing as shown in Figure 2 of the Specification and discussed above, the Examiner has not articulated sufficient findings of fact regarding such modules in the Sentry Project.

Accordingly, we do not sustain the Examiner’s rejection of claim 1 as anticipated by the Sentry Project.

Obviousness: Latham & Kogut (Claims 1, 3–7, & 21–24)

For Latham, Appellant acknowledges, “Obviously, the detector system 15 and the deter system 13 can be provided with an individual separate enclosure essentially as shown in Fig. 3.” App. Br. 15. “Further, the other devices arguably are already provided with their own separate enclosures, such as the video surveillance system 202 shown in Fig. 3 of Latham.” *Id.* at 13. However, Appellant argues none of Latham’s embodiments disclose putting all the components in a single enclosure. *Id.*

However, we agree with the Examiner's finding that Latham teaches "the enclosure [containing the programmable determination device], the detector device, and the deter device can be mounted on a rigid structure within the monitored area." Latham ¶ 10; Ans. 6. This is depicted in Figure 3 of Latham. Just as with Rojas, such a mounting of modules on a rigid structure is no different than the "coupling" or "stacking" of modules in Figure 2 of the Specification. Thus, Latham's teaching of modules mounted together is sufficient for teaching the disputed "disposed in the enclosure" limitations.

We further agree with the Examiner that in view of Latham and Kogut, a person of ordinary skill in the art at the time of the invention would have been motivated to put the claimed components in a single enclosure, including "to prevent weather elements from interfering with the operations"; "to prevent tampering"; and to provide "a mobile platform" such as an "exterior robot." Ans. 5–6 (citing Latham ¶ 10; Kogut Fig. 6). "If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). Appellant has not sufficiently persuaded us against the Examiner's findings or conclusions, such as by showing that combining the components into one single enclosure rather than separate enclosures would be beyond the level of ordinary skill or yield anything other than a predictable result.

Accordingly, we sustain the Examiner's obviousness rejection of

claim 1, and dependent claims 3–7, and 21–24, which Appellant argues are patentable for similar reasons. App. Br. 14, 6; 37 C.F.R. § 41.37(c)(1)(iv).

Obviousness: Latham & Kogut (Claim 2)

Dependent claim 2 further recites “a two-way audio device disposed in the enclosure.” Appellant makes the same “enclosure” argument discussed above for claim 1. App. Br. 14–15. We are not persuaded for the same reasons discussed above.

Accordingly, we sustain the Examiner’s rejection of claim 2.

Obviousness: Latham, Kogut, & Lemons (Claims 25–28)

Independent claim 25 recites “a plurality of microphones disposed in an enclosure.” Appellant makes the same “enclosure” argument discussed above for claim 1. App. Br. 15–16. We are not persuaded for the same reasons discussed above. We also agree with the Examiner that Appellant’s argument contending no motivation to combine the plurality of microphones taught by Lemons with the intruder recognition via sound of Latham and the location determination of Kogut, without more, is unsupported. Ans. 6; App. Br. 16; *see also In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“it has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections”). The Examiner has articulated reasoning with a rational underpinning for the combination (Final Act. 11–13) and Appellant has not proffered sufficient evidence or argument to persuade us of Examiner error.

Claim 25 further recites “outputting a deterrent substance from the deterrent dispensing device in a direction that is based on the location of the moving object as determined from the captured sounds.”

Appellant contends that Latham’s “spray emitter 216 appears to have a fixed location”; “Lemons utilizes sound to determine the presence of an object, but not a direction”; and “Kogut discloses aiming a non-lethal weapon in response to video images and motion detection” but not sound. App. Br. 17. Appellant therefore contends “there is no motivation to combine” because “Latham and Lemons do not use sound to determine a direction for an object” and “Kogut relies on video or images.” *Id.* at 17–18.

However, we agree with the Examiner (Ans. 7) that “one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Given that Latham and Lemons use sound to detect the presence of an object, Appellant has not sufficiently addressed the Examiner’s articulated reasoning as to why a person of ordinary skill in the art would have been motivated to combine Latham and Lemons with Kogut’s teaching of aiming a weapon towards a detected moving object, including “to further identify intruders” (i.e., via sound instead of just video) and “to better control the targeting of the Latham system.” Final Act. 13, 11. Thus, Appellant’s argument that an ordinarily skilled artisan would not have been motivated is unpersuasive.

Accordingly, we sustain the Examiner’s rejection of claim 25, and claims 26–28, which Appellant argues are patentable for similar reasons. *See* App. Br. 18; 37 C.F.R. § 41.37(c)(1)(iv).

Obviousness: Latham, Kogut, Lemons, & Somner (Claims 29, 32, & 34)

Independent claim 29 recites “a plurality of microphones disposed in an enclosure.” Appellant makes the same “enclosure” argument discussed above for claims 1 and 25. App. Br. 18. We are not persuaded for the same

reasons discussed above.

Accordingly, we sustain the Examiner's rejection of claim 29, and claims 32 and 34, which Appellant argues are patentable for similar reasons. *See* App. Br. 18; 37 C.F.R. § 41.37(c)(1)(iv).

Obviousness: Latham, Kogut, Lemons, & Sells (Claims 35 & 36)

Dependent claim 35 further recites “selecting a subset of the multiple nozzles to output a deterrent substance.” Dependent claim 36 recites a commensurate limitation.

The Examiner relies on Sells for teaching this limitation. Ans. 7–8.

Appellant argues “Sells is directed to a remote marine craft” with “a propulsion device that has a multiple direction nozzle assembly” in which “water is discharged from the nozzles to propel the marine craft in an opposing direction.” App. Br. 19. According to Appellant, “[t]here is no motivation . . . to look to the propulsion device . . . of a marine craft of Sells to modify a security system.” *Id.*

The Examiner does not directly address Appellant's argument, instead simply finding “[i]t would have been obvious to use multiple nozzles with Latham in order to dispense the necessary amount of deterrent as needed for the application” (Ans. 7) and “to use multiple directional nozzles with Latham / Kogut in order to send the deterrent in the proper direction, as suggested by Sells' multiple nozzle liquid jet pump.” Final Act. 18.

“Generally, a skilled artisan would only have been motivated to combine analogous art. Prior art is analogous where either (1) the art is from the same field of endeavor, regardless of the problem addressed or (2) even if the reference is not within the same field of endeavor, the reference still is reasonably pertinent to the particular problem with which the inventor is

involved.” *In re Ethicon, Inc.*, 844 F.3d 1344, 1349 (Fed. Cir. 2017) (quotations omitted). Here, we agree with Appellant that the Examiner has not shown marine craft propulsion and security systems are from the same field of endeavor, nor how marine craft propulsion would be reasonably pertinent to the particular problem with which the inventor was involved (e.g., “a security system that verifies that the source of an alarm signal is an intruder, and that efficiently and effectively deters the intruder,” let alone more specifically a security system with “multiple nozzles” in which “a subset of nozzles . . . that are generally pointed in the direction of the intruder may be activated to emit pepper spray therefrom”). Spec. ¶¶ 9, 63.

Accordingly, given the record before us, we are constrained to reverse the Examiner’s rejection of claims 35 and 36.

DECISION

For the reasons above, we affirm the Examiner’s decision rejecting (A) claim 1 as anticipated by Rojas; (B) claims 1–7, and 21–24 as obvious over Latham and Kogut; (C) claims 25–28 as obvious over Latham, Kogut, and Lemons; and (D) claims 29, 32, and 34 as obvious over Latham, Kogut, Lemons, and Somner.

We reverse the Examiner’s decision rejecting (i) claim 1 as anticipated by the Sentry Project and (ii) claims 35 and 36 as obvious over Latham, Kogut, Lemons, and Sells.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED-IN-PART